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Purpose	This study sought to identify patterns of self-reported regret after hysterectomy.
Methods	Women undergoing hysterectomy for a benign indication were recruited in the 2 weeks prior to surgery. Women reported demographics and completed validated questionnaires (Decisional Regret Scale, Patient Health Questionnaire-9, Decisional Conflict Scale, and the Comprehensive Score for Financial Toxicity) up to 7 times over the first year postsurgery. Medical records were reviewed for clinical and operative details. Latent class growth mixture models were applied to the repeated regret scores to identify patterns after hysterectomy. Clinical and other participant characteristics were compared across the classes.
Results	Three latent classes were identified among the 459 participants (422 of whom completed questionnaires at 12 months): "High Regret" (7.4%), women with a high regret score at baseline that did not improve over time; "Decreasing Regret" (13.3%), women with high baseline levels of regret but whose regret scores improved over time; and "Least Regret" (79.3%), women with the lowest baseline regret scores that remained low after surgery. These classes did not vary with respect to indication for surgery, clinical characteristics, age, or body mass index. Disproportionately more African American women (adjusted odds ratio: 1.99, 95% CI: 1.01–3.9) were in the "Decreasing Regret" versus "Least Regret" classes. Baseline satisfaction varied between the classes, with the "Least Regret" group having higher baseline satisfaction with their decision. Women with "Decreasing Regret" reported worse financial toxicity associated with surgery versus women in the "Least Regret" class (adjusted odds ratio: 0.95, 95% CI: 0.92–0.99).
Conclusions	For some women, decisional regret may worsen after hysterectomy. More often, initial regret lessens over time. Future studies that identify factors strongly associated with self-reported regret could lead to improved counseling about postsurgical expectations. (*J Patient Cent Res Rev.* 2020;7:329-336.)
Keywords	hysterectomy; regret; surgical counseling; patient expectations; financial toxicity

Hysterectomy is the most commonly performed nonobstetric surgical procedure for women in the United States.[1] The majority of these surgeries are done for indications such as uterine fibroids, uterine prolapse, and endometriosis, with the primary goal of eliminating or reducing symptoms and improving the woman's quality of life. There is increasing research on satisfaction with hysterectomy and its various surgical approaches. Dissatisfaction can be conceptualized as a result of "unfulfilled expectations."[2]

A separate, yet important, construct is regret, which is related to "awareness of a preferred action/decision and the experience of self-blame for action/decision taken."[3] There is little evidence examining regret after hysterectomy. Further, it is unknown if there are variable

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patterns of regret after hysterectomy and how patients with different patterns of regret may differ with respect to clinical or other characteristics.

The goal of this work was to identify patterns of self-reported regret in the year after hysterectomy in a racially diverse longitudinal cohort study. Latent class analyses were used to fully maximize the information obtained in the repeated measurement of self-reported regret. We further examined whether any clinical or other characteristics differed among women for whom different patterns of self-reported regret were identified.

METHODS

The Detroit Hysterectomy Study was a prospective cohort study of women undergoing hysterectomy at Henry Ford Health System (Detroit, MI).[4] Women who were scheduled for a hysterectomy at Henry Ford Hospital in downtown Detroit or Henry Ford West Bloomfield Hospital or Henry Ford Macomb Hospital in suburban Detroit were sent a letter inviting their participation in the study. Eligible patients had to be at least 18 years of age. Women who were having the hysterectomy for suspected cancer and women who had a planned concurrent urogynecologic procedure were not invited to participate, as their recovery patterns would differ from other hysterectomy patients. The study was approved by the Henry Ford Health System institutional review board.

Women were called in the 2 weeks prior to their scheduled hysterectomy, defined as baseline (presurgery) interviews, and verbal informed consent was obtained. Participants were contacted at 1, 4, and 6 weeks and 3, 6, and 12 months postsurgery to complete validated questionnaires. Instruments included: the Patient Health Questionnaire-9 (PHQ-9) to assess depression (higher scores are worse);[5] the Decisional Regret Scale for self-reported level of regret;[6] the Decisional Conflict Scale to assess personal uncertainty about having a hysterectomy;[7] and the Comprehensive Score for Financial Toxicity to assess level of financial distress associated with having the hysterectomy (lower scores suggest worse financial toxicity).[8]

The electronic medical record (EMR) for each participant was reviewed to collect patient and clinical data. Patient variables collected from the EMR included self-reported race (classified as African American, White, or Other), age, body mass index (kg/m²), and insurance type (private/military or public). Clinical and operative details taken from the EMR included estimated blood loss (in ml), any preoperative blood transfusion, any postoperative blood transfusion, any intra- or postoperative complications, surgical route (mutually exclusively categorized as abdominal, vaginal, laparoscopic, laparoscopic-assisted vaginal, or robot-assisted), procedure duration (in hours),

uterine weight (in grams), and whether an oophorectomy was performed. The preoperative indication for hysterectomy was collected from the EMR, and each woman could have multiple indications listed. The indications were not mutually exclusive and were grouped as uterine fibroids, pelvic pain, heavy bleeding, endometriosis, and "other."

As part of the Decisional Conflict Scale, women were asked if they Strongly Agree, Agree, Neither Agree or Disagree, Disagree, or Strongly Disagree with the following statement: "I was satisfied with my decision." Those who responded with Strongly Agree or Agree were classified as being "satisfied" with their decision. In the interview prior to surgery and at 12 months postsurgery, women were asked their current level of pain (0 [no pain] to 10 [extreme pain]) and their average level of pain for the last 7 days (0 [no pain] to 10 [extreme pain]). At 12 months postsurgery, women were asked their current pain level due to their hysterectomy site or incision (0 [no pain] to 10 [extreme pain]) and apart from their incision (0 [no pain] to 10 [extreme pain]). They were also asked their average pain level at the site or incision over the last 7 days (0 [no pain] to 10 [extreme pain]). Other demographic information was collected during the baseline interview.

The primary outcome measure for these analyses was the Decisional Regret Scale. The scale can result in a score ranging from 5 to 25, which is the sum of individual scores from each of the 5 survey questions. A higher score indicates more regret. A latent class and growth mixture modeling approach using the R software lcmm package was applied to the overall regret scores that were reported by each woman in the year after hysterectomy.[9] Variables were then compared across the identified latent classes. The final latent class model, including the determination of number of classes, was chosen based on the combination of three model assessment strategies: 1) the model goodness of fit using the adjusted Bayesian information criteria (BIC), for which lower is associated with a better fit; 2) the number of participants assigned to each class, for which small numbers of participants in a class is not practical for analyses; and 3) the model classification quality considering the posterior probabilities for group membership, for which higher mean posterior probabilities in each class is associated with a better fit.[9-12]

After identifying the latent classes using the self-reported regret measure, each characteristic, nominal or ordinal, was compared across the latent classes — including the additional three self-reported measures assessing depression, satisfaction, and financial toxicity — participant demographics, and clinical and operative characteristics. For the nominal variables, chi-squared tests were applied to compare overall difference across the latent class groups and to perform post hoc pairwise

comparisons between each latent group using R software. Note that R can automatically perform a Yates continuity correction to prevent overestimation of statistical significance for small data, especially for cells below 10. For the numerical variables, one-way ANOVA tests also were conducted to first test overall difference across the latent class groups, then 2-sample *t*-tests with Bonferroni corrections were further used to examine the difference between each of the two latent groups, which is mainly useful when there are a fairly small number of multiple comparisons. We created a single multinomial regression model with all baseline and demographic characteristics to compare the odds of class membership associated with each factor by calculating odds ratios and 95% confidence intervals, adjusted for all other variables in the model.

RESULTS

Of the 460 women who enrolled in the study, 459 completed baseline interviews and 422 women completed their survey at 12 months postsurgery (91.7%). Based on the adjusted BIC (Online Supplemental Figure S1), the size of the classes, and investigator review,[10] a 3-class model was chosen to represent the data. Class 1 (High Regret) and Class 2 (Decreasing Regret) started at similar baseline regret scores but took opposite trajectories over the year (Figure 1). Over time, Class 1 (n=34 [7.4%]) had an increase in mean overall regret score and ended the year with higher levels of regret than at baseline. Among women in Class 2 (n=61 [13.3%]), the overall regret scores decreased from baseline over the year after surgery. Class 3 (Least Regret) was the largest with 365 participants (79.3%) and showed a regret score trajectory that was initially lower than the other 2 classes and

declined further in the year after surgery (Figure 1). Maximum change from baseline was noted in the High Regret class, with a net increase in regret. Peak regret also was demonstrated in High Regret and occurred at approximately 6 months postsurgery.

Of the 4 demographic characteristics examined, 2 differed across the latent classes (Table 1). Race was significantly different between the Decreasing Regret and Least Regret classes, specifically. There was a higher proportion of White women in Least Regret than African American women (55.6% vs 40.8%); however, there were disproportionately more African American women than White women in Decreasing Regret (57.4% vs 34.4%). The classes did not differ in their distributions of age or body mass index. There was a higher proportion of women on public insurance, versus private insurance, in the Decreasing Regret class compared with women in Least Regret (45.8% vs 25.1%).

Out of 5 baseline characteristics, 2 were statistically significantly different across the latent classes (Table 2). The 3 classes did not differ with respect to baseline pain scores or depression scores. There was a statistically significant difference between the 3 groups in baseline satisfaction between High Regret (87.9%) and Least Regret (98.6%) and between Decreasing Regret (86.7%) and Least Regret, with Least Regret (Class 3) having the highest overall satisfaction scores. There was a statistically significant difference in baseline financial toxicity scores between Decreasing Regret (26.38) and Least Regret (30.99), with Decreasing Regret (Class 2) having the lowest (worse) overall mean financial toxicity score.

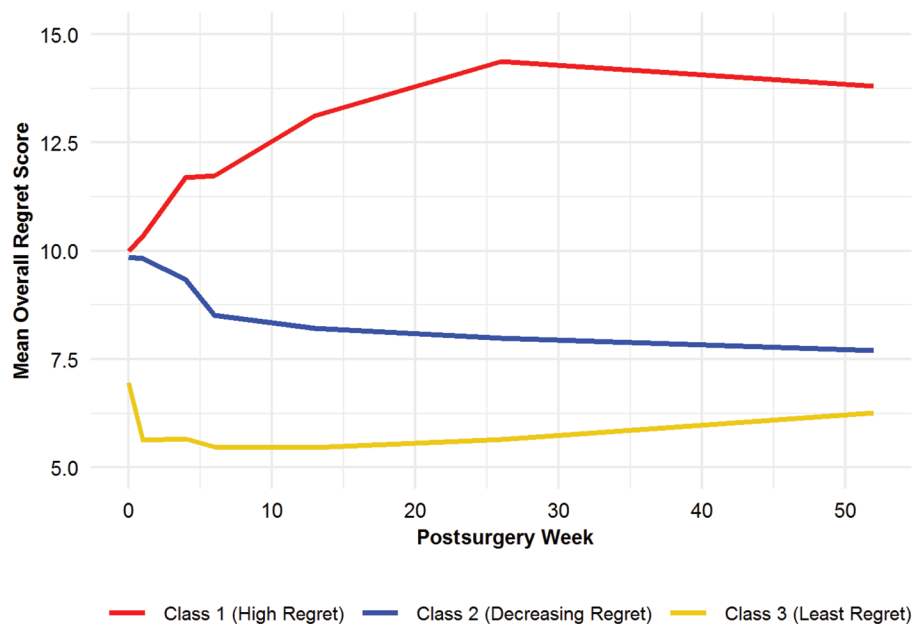

Figure 1. Mean overall regret score over time (postsurgery) for 3 latent class groups. Red line = Class 1 (High Regret) (n=34, 7.4%); blue line = Class 2 (Decreasing Regret) (n=61, 13.3%); yellow line = Class 3 (Least Regret) (n=365, 79.3%).

Table 1. Participant Demographics by Latent Class Group

Participants with regret scores (N=460)	Latent class group			P
	Class 1: High Regret n_1=34 (7.4%)	Class 2: Decreasing Regret n_2=61 (13.3%)	Class 3: Least Regret n_3=365 (79.3%)	
Self-reported race, n (%)[a, NA=3]				0.026[b] C2 vs C3*
African American	16 (48.5)	35 (57.4)	148 (40.8)	
White	15 (45.5)	21 (34.4)	202 (55.6)	
Other	2 (6.1)	5 (8.2)	13 (3.6)	
Age in years, mean (SD)	48.3 (11.3)	47.7 (9.2)	45.8 (7.7)	0.08[c]
BMI (kg/m^2), mean (SD)[NA=20]	32.4 (6.3)	32.6 (8.4)	33.1 (7.6)	0.83[c]
Insurance type, n (%)[a, NA=8]				0.005[b] C2 vs C3*
Private/Military	24 (70.6)	32 (54.2)	269 (74.9)	
Public	10 (29.4)	27 (45.8)	90 (25.1)	

*P<0.01.

[a]Frequency number and percentage of column sum (%).

[b]Chi-squared test compared the difference across 3-class groups and performed post hoc pairwise comparisons between each two latent groups.

[c]One-way ANOVA tested the difference across the 3-class groups, and 2-sample t-tests with Bonferroni performed post hoc pairwise comparisons between each two latent groups.

BMI, body mass index; NA, number of missing values; SD, standard deviation.

Table 2. Baseline (Presurgery) Characteristics by Latent Class Group

Participants who completed presurgery interviews (N=459)	Latent class group			P
	Class 1: High Regret n_1=34 (7.4%)	Class 2: Decreasing Regret n_2=61 (13.3%)	Class 3: Least Regret n_3=364 (79.3%)	
Current pain level, mean (SD)[NA=2] (0=no pain, 10=extreme pain)	2.70 (2.95)	3.57 (3.02)	2.73 (3.05)	0.13[c]
Average pain level over the last 7 days, mean (SD)[NA=197] (0=no pain, 10=extreme pain)	5.47 (2.65)	6.12 (2.30)	5.49 (2.36)	0.282[c]
PHQ-9 score, mean (SD) (highest score is associated with depression)	6.30 (4.64)	7.07 (7.22)	5.54 (5.41)	0.132[c]
Satisfaction, n (%)[a, NA=4] (determined via question on Decisional Conflict Scale)[d]	29 (87.9)	52 (86.7)	357 (98.6)	<0.001[b] C1 vs C3* C2 vs C3*
Baseline financial toxicity, mean (SD)[NA=61] (lower scores suggest worse financial toxicity)	28.83 (7.76)	26.38 (10.03)	30.99 (9.02)	0.002[c] C2 vs C3**

*P<0.001; **P<0.01.

[a]Frequency number and percentage of column sum (%).

[b]Chi-squared test compared the difference across 3-class groups and performed post hoc pairwise comparisons between each two latent groups.

[c]One-way ANOVA tested the difference across the 3-class groups, and 2-sample t-tests with Bonferroni performed post hoc pairwise comparisons between each two latent groups.

[d]Satisfaction defined as reporting Strongly Agree or Agree to the statement: "I was satisfied with my decision."

NA, number of missing values; PHQ. Patient Health Questionnaire; SD, standard deviation.

Original Research

Responses, grouped by latent class, for the 422 participants who completed the postsurgery questionnaire at 12 months are shown in Table 3. All 12-month postsurgery characteristics were statistically significantly different across the 3 latent class groups. We further tested the pairwise differences. Women in Least Regret fared the best among all classes with respect to scores for pain, depression, satisfaction, and financial toxicity. The differences between Least Regret and Decreasing Regret were statistically significant for each factor that was examined. When comparing Least Regret with High Regret, High Regret (Class 1) fared worse with respect to current pain, depression, satisfaction, and financial toxicity. Only satisfaction at 12 months differed between High Regret and Decreasing Regret, with High Regret (Class 1) faring worse. Interestingly, 42% of women in High Regret, the class with the highest regret scores, reported being satisfied with their procedure.

A total of 14 operative factors were compared between the latent classes to determine if any of these played a role in the different patterns of regret represented by each of the classes after hysterectomy (Table 4). There were no statistically significant differences among the latent classes in any of the operative factors considered. All latent classes were similar in their distributions of route of surgery, rates of operative complications, amount of intraoperative blood loss, rates of transfusion, duration of procedure, and uterine weight. The classes also were similar in the rates of oophorectomy and the indications for hysterectomy. There were no women whose sole indication for surgery was pelvic pain.

We created a single multinomial regression model with all baseline and demographic characteristics to compare the odds of being in Class 1 (High Regret) and Class 2 (Decreasing Regret) to being in Class 3 (Least Regret). After adjusting for all other factors in the model, women who at baseline reported being satisfied with their decision (vs those who were not satisfied with their decision) were less likely to be in High Regret (adjusted odds ratio [aOR]: 0.07, 95% CI: 0.02, 0.29; P<0.001) and were less likely to

Table 3. 12-Month Postsurgery Characteristics by Latent Class Group

Participants who completed 12-month postsurgery interviews (N=422)	Class 1: High Regret n=30 (7.1%)	Class 2: Decreasing Regret n=56 (13.3%)	Class 3: Least Regret n=336 (79.6%)	P
Current pain level due to hysterectomy site or any incisions, mean (SD)[NA=13] (0=no pain, 10=extreme pain)	0.8 (2.1)	0.7 (1.6)	0.2 (0.8)	<0.001[c] C1 vs C3** C2 vs C3**
Current pain level apart from hysterectomy site or any incisions, mean (SD)[NA=13] (0=no pain, 10=extreme pain)	2.2 (3.3)	1.6 (2.5)	0.8 (1.9)	<0.001[c] C1 vs C3** C2 vs C3***
Average pain level over the last 7 days due to hysterectomy site or any incisions, mean (SD)[NA=13] (0=no pain, 10=extreme pain)	0.7 (1.6)	1.0 (2.3)	0.22 (0.8)	<0.001[c] C2 vs C3**
PHQ-9 Score, mean (SD)[NA=30] (highest score is associated with depression)	6.8 (5.7)	5.7 (6.7)	3.8 (5.2)	0.003[c] C1 vs C3*** C2 vs C3***
Satisfaction, n (%)[a, NA=13] (determined via question on Decisional Conflict Scale)[d]	12 (41.4)	51 (92.7)	321 (98.8)	<0.001[b] C1 vs C2* C1 vs C3* C2 vs C3*
Financial toxicity, mean (SD)[NA=44] (lower scores suggest worse financial toxicity)	25.5 (10.6)	27.2 (10.3)	31.0 (9.4)	<0.001[c] C1 vs C3*** C2 vs C3***

*P<0.001; **P<0.01; ***P<0.05.

[a]Frequency number and percentage of column sum (%).

[b]Chi-squared test compared the difference across 3-class groups and performed post hoc pairwise comparisons between each two latent groups.

[c]One-way ANOVA tested the difference across the 3-class groups, and 2-sample t-tests with Bonferroni performed post hoc pairwise comparisons between each two latent groups.

[d]Satisfaction defined as reporting Strongly Agree or Agree to the statement: "I was satisfied with my decision."
NA, number of missing values; PHQ. Patient Health Questionnaire; SD, standard deviation.

Table 4. Pre- and Postoperative Factors by Latent Class Group

Participants with postsurgery chart abstraction (N=455)	Class 1: High Regret n_1=34 (7.5%)	Class 2: Decreasing Regret n_2=61 (13.4%)	Class 3: Least Regret n_3=360 (79.1%)	P
Estimated blood loss in ml, mean (SD)[NA=6]	201.2 (238.8)	125.7 (128.6)	173.3 (211.8)	0.16[c]
Intraoperative transfusion, n (%)[a]	0 (0.0)	0 (0.0)	1 (0.3)	0.88[b]
Postoperative transfusion, n (%)[a, NA=2]	0 (0.0)	0 (0.0)	3 (0.8)	0.67[b]
Any complications, n (%)[a, NA=1]	5 (14.7)	6 (10.0)	23 (6.4)	0.16[b]
Surgery route, n (%)				0.76[b]
Abdominal	13 (38.2)	19 (31.1)	99 (27.5)	
Vaginal	1 (2.9)	2 (3.3)	21 (5.8)	
Laparoscopic	4 (11.8)	12 (19.7)	64 (17.8)	
LAVH	6 (17.6)	6 (9.8)	41 (11.4)	
Robot-assisted	10 (29.4)	22 (36.1)	135 (37.5)	
Procedure duration in hours, mean (SD)	2.73 (1.70)	2.49 (1.14)	2.47 (1.02)	0.41[c]
Length of stay > 1 day, n (%)[a, NA=1]	31 (91.2)	54 (88.5)	328 (91.4)	0.77[b]
Uterine weight in grams, mean (SD)[NA=6]	388.2 (437.6)	306.1 (274.7)	369.3 (541.9)	0.64[c]
Had oophorectomy, n (%)[a]	15 (44.1)	21 (34.4)	113 (31.4)	0.31[b]
Indication for surgery is fibroids, n (%)[a]	19 (55.9)	44 (72.1)	230 (63.9)	0.26[b]
Indication for surgery is pelvic pain, n (%)[a]	12 (35.3)	24 (39.3)	152 (42.2)	0.70[b]
Indication for surgery is heavy bleeding, n (%)[a]	18 (52.9)	31 (50.8)	229 (63.6)	0.10[b]
Indication for surgery is endometriosis, n (%)[a, NA=1]	1 (2.9)	3 (4.9)	19 (5.3)	0.84[b]
Indication for surgery is other, n (%)[a, NA=1]	32 (94.1)	46 (75.4)	294 (81.9)	0.08[b]

[a]Frequency number and percentage of column sum (%).

[b]Chi-squared test compared the difference across 3-class groups and performed post hoc pairwise comparisons between each two latent groups.

[c]One-way ANOVA tested the difference across the 3-class groups, and 2-sample t-tests with Bonferroni performed post hoc pairwise comparisons between each two latent groups.

LAVH, Laparoscopically assisted vaginal hysterectomy; NA, number of missing values; SD, standard deviation.

be in Decreasing Regret (aOR: 0.09, 95% CI: 0.02, 0.3; P<0.001) than in Least Regret (Table 5). For a single unit increase in the financial toxicity score (higher scores mean lower toxicity), there was a decrease in the odds of being in Decreasing Regret versus Least Regret (aOR: 0.95, 95% CI: 0.92, 0.99; P<0.05). A 1-year increase in age at the time of surgery was associated with increased odds of being in Decreasing Regret versus Least Regret (aOR: 1.05, 95% CI: 1.01, 1.1; P<0.05). African American women were more likely than White women to be in Decreasing Regret versus Least Regret (aOR: 1.99, 95% CI: 1.01, 3.9; P<0.05).

DISCUSSION

In this study, we found that women generally follow one of three patterns in reporting their level of regret after hysterectomy. Some women have higher baseline regret scores and they tend to increase over time. Some women have higher regret scores at baseline but improve over time after surgery, while some women have lower regret scores that fall even lower after surgery.

Interestingly, these classes (High Regret, Decreasing Regret, and Least Regret) did not statistically significantly differ with respect to surgical indication or clinical characteristics such as uterine weight. African American women, older women, and women who had worse financial toxicity scores at baseline were more likely to have Decreasing Regret as opposed to Least Regret. While women reporting lower satisfaction with their decision at baseline were more likely to have High Regret, approximately 40% of the women who were in this class with the highest sustained regret scores reported being satisfied with their decision regarding their hysterectomy 12 months after their surgery.

In a study of women with symptomatic fibroids, Stewart et al reported that African American women were more concerned than White women with uterine-preserving treatment and treatments that preserved fertility.[13] These results could explain why African American women who had hysterectomy tended to have worse regret

Table 5. Associations Between Baseline/Demographic Characteristics and Regret Class Membership[a]

Characteristic	Class 1 (High Regret) vs Class 3 (Least Regret)			Class 2 (Decreasing Regret) vs Class 3 (Least Regret)		
	Beta	SE	aOR (95% CI)	Beta	SE	aOR (95% CI)
Presurgery survey						
Current pain level due to hysterectomy site or any incisions	-0.03	0.09	0.97 (0.82–1.16)	0.07	0.05	1.07 (0.96–1.19)
Depression per PHQ-9 score	0.002	0.05	1.002 (0.91–1.1)	-0.02	0.03	0.98 (0.92–1.04)
Satisfaction, Agree (ref. Not Agree)	-2.7	0.75	0.07* (0.02–0.29)	-2.44	0.64	0.09* (0.02–0.3)
Financial toxicity	-0.02	0.03	0.98 (0.92–1.04)	-0.05	0.02	0.95** (0.92–0.99)
Demographics						
Self-reported race, African American (ref. White)	0.43	0.5	1.53 (0.58–4.08)	0.69	0.34	1.99** (1.01–3.9)
Age (in years)	0.02	0.03	1.02 (0.96–1.09)	0.05	0.02	1.05** (1.01–1.1)
Body mass index (kg/m^2)	0.01	0.03	1.01 (0.95–1.07)	-0.01	0.02	0.99 (0.95–1.03)
Insurance, Public (ref. Private/Military)	-0.85	0.69	0.43 (0.11–1.64)	0.42	0.35	1.52 (0.76–3.03)

*$P<0.001$; **$P<0.05$.

[a]Odds ratios are adjusted for all other baseline/demographic variables in the table and are for a 1-unit change in the variable.

aOR, adjusted odds ratio; PHQ, Patient Health Questionnaire; SE, standard error.

scores than White women. There is paucity of data in the gynecologic literature looking at nonspecific regret after hysterectomy; however, some studies have specifically focused on regret of loss of fertility after hysterectomy. Farquhar et al examined data from patients who underwent hysterectomy with or without oophorectomy and analyzed physical and psychological outcomes over a 3-year time period.[14] This study showed that, even 3 years after surgery, women regretted the loss of their fertility; these data suggest that women who may not be fully resolved to end their fertility with hysterectomy may fare worse in the immediate years after the surgery.

While the present study focused on regret after surgery, most studies focus on satisfaction after surgery. In a study of women who sought treatment for noncancerous pelvic problems, women who had hysterectomy tended to report better health-related quality-of-life measures after treatment compared with women who had either uterine-preserving surgery or no surgery.[15] Darwish et al reviewed 22 studies that evaluated depression and anxiety posthysterectomy and found no significant change in depression or anxiety symptoms posthysterectomy for

benign indications.[16] Fortin et al examined multiple studies assessing whether quality of life was associated with hysterectomy surgical approach.[17] The report concluded that the data available in current studies is insufficient to evaluate quality of life posthysterectomy by surgical approach as it relates to physical, psychosocial, and sexual function in the postoperative period.

Comparing the results from the latent class analyses utilizing regret scores in the present work with publications of mainly cross-sectional analyses of reported satisfaction is challenging. However, together they may present a fuller picture of the experience of patients after hysterectomy. While most patients are satisfied after hysterectomy, subgroups of women may still regret their surgery. Satisfaction and regret are different constructs, and both should be considered in clinical care. Patients who are experiencing high levels of regret during presurgical counseling for their hysterectomy may be counseled that it is possible they will be satisfied with their surgery but that the regret they feel may persist or worsen after their hysterectomy. Clinicians should prepare patients for this possibility.

Strengths and Limitations

Strengths of this study are the prospective, longitudinal study design and the novel use of latent class analysis to contribute unique evidence to make patient-centered care in gynecology more evidence-based. Use of validated data collection tools repeated over short intervals over the course of the study, paired with a high follow-up rate, are additional strengths. As with any epidemiologic study, this study has limitations. Specific regrets, such as those related to fertility or perceived loss of femininity, were not captured. The small size of Class 1 (High Regret, 7.4% of study cohort) could have masked smaller differences that might have been revealed with a larger class size.

CONCLUSIONS

In this study, the majority of patients who had hysterectomy were likely to report low levels of regret after their surgery. However, an important minority of women reported a growing level of regret after surgery or did not achieve the low level of regret experienced by most women. These findings suggest that there are various patterns of posthysterectomy regret, which is a patient-centered response that is separate from satisfaction but one that is not frequently measured or studied. Future larger studies should further identify specific factors strongly associated with self-reported regret. Women and their providers could use such information in counseling about postsurgical expectations.

Patient-Friendly Recap

- Most hysterectomy surgeries are performed to relieve symptoms from benign conditions like uterine fibroids. While patient satisfaction is reported to be high, less is known about patient regret over having a hysterectomy.

- The authors prospectively interviewed women both before and up to a year after their hysterectomy to measure the level and common patterns of regret.

- They found that a fair amount of women (13%) who express regret after the surgery see their regret decrease within 12 months.

- However, some women who undergo a hysterectomy experience high regret that does not abate or gets worse. More research is needed to identify these patients in advance and to make presurgical counseling more patient-centered.

Author Contributions

Study design: Sangha, Bossick, Wegienka. Data acquisition or analysis: Sangha, Bossick, Su, Coleman, Wegienka. Manuscript drafting: all authors. Critical revision: all authors.

Conflicts of Interest

None.

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